

# Training School on Molecular Detection and Population Genetics of Dothistroma Needle Blight Pathogens (COST Action FP1102)

3rd to 7th March 2014, Uppsala, Sweden

It is a pleasure to invite you to the Training School on the molecular detection and population genetics of Dothistroma needle blight (DNB) pathogens to be held at the Swedish University of Agricultural Sciences (Uppsala), from **3<sup>rd</sup> to 7<sup>th</sup> March 2014**. The aim of the course is to provide early stage researchers and other interested parties with a better understanding of the procedures involved in the detection and diagnosis of Dothistroma needle blight and aspects related to conducting population studies on the pathogens. These will be carried out through a series of lectures and laboratory sessions.

## Lecturers and demonstrators likely to include:

**Dr Irene Barnes**, FABI, South Africa

**Prof Jan Stenlid**, SLU, Sweden

**Hanna Millberg**, SLU, Sweden

**Dr Anna Brown**, Forest Research, United Kingdom

**Dr Rein Drenkhan**, EMU, Estonia

**The training school will be limited to 20 participants.**

A preliminary programme can be found below. However, this program will be modified according to who attends the training session and the particular needs of the group. We therefore ask you to please complete the survey found at the end of the document so that we can modify the course content accordingly. Suggestions are also welcome.

## Preliminary programme:

**Monday 3<sup>rd</sup> March** - Arrival at venue

### Tuesday 4<sup>th</sup> March

#### *Lectures*

- Introduction to DIAROD
- Introduction to DNB – distribution, hosts, symptoms
- Isolation of Dothistroma – growth media, isolation techniques
- Culture maintenance and storage

#### *Practical*

- Isolation of Dothistroma from needles

### Wednesday 5<sup>th</sup> March

#### *Lectures*

- Molecular identification methods (ITS-RFLP, sequencing, conventional PCR, mating type)
- Real time PCR

#### *Practical*

- ITS-RFLP, conventional PCR, mating type
- Real time PCR

### Thursday 6<sup>th</sup> March

#### *Lectures*

- Introduction to population genetics
- Introduction to microsatellites
- Practical principles of fragment analysis
- How to score your data
- File formats for data analyses

## Friday 7<sup>th</sup> March

Departure of the participants

### Costs

**Travel and subsistence grants of up to 800 Euros will be available for around 20 participants.**

Accommodation will be at the Kvarntorget vandrarhem and will cost from 40-50 Euros per night including breakfast.

### Local airports

Uppsala is only 20-30 minutes by car from Stockholm Arlanda Airport (Stockholm's main airport). There are good links from Arlanda to most European capitals.

<http://www.swedavia.com/arlanda/>

Regular trains and buses run from Arlanda to Uppsala and take about 30 minutes.

<http://www.swedavia.com/arlanda/to-from/>

### Registration:

The training school is intended for those involved in work directly related to the COST Action FP1102, DIAROD. It is open to PhD students, early stage postdoctoral workers and those who wish to improve their Dothistroma Needle Blight detection and diagnostic skills and for those who wish to do some population genetic studies on Dothistroma. A maximum of two participants from each research group may be registered, subject to availability of places.

To register please complete the registration form below and return it to Claire Holmes (claire.holmes@forestry.gsi.gov.uk) as soon as possible. **The deadline for registration is 3<sup>rd</sup> FEBRUARY 2014 but please reply as soon as possible. Please indicate on the form if you wish to receive reimbursement. Grants will be allocated on a first come first served basis.**

We also invite researchers who can pay their costs from other sources.

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### REGISTRATION FORM

**Deadline for registration is 3<sup>rd</sup> February 2014**

Participant Title:	(Mr/Mrs/Ms/Dr/Prof etc)
Participant Name:	
Email address:	
Institution:	
Address:	
City:	
Country:	
Post code:	
Phone Number:	
Grant requested (yes/no)	
Estimated cost of travel (Euros)	

### Survey for Training School:

Please tick the areas that you would like presented at the training school. This will help us focus on the topics that are most relevant to the participants.

	Lecture / Theory	Practical
<b>CULTURING</b>		
Isolation of Dothistroma from needles		
Culture maintenance and storage		
<b>DIAGNOSTICS AND TAXONOMY</b>		
Conventional PCR for species diagnosis		
Mating type amplification and scoring		
Real time PCR		
Blast searches in GenBank		
Creating a phylogenetic tree (NJ in Mega)		
<b>POPULATION GENETICS</b>		
Introduction to microsatellites		
Using existing microsatellite markers – PCR set-up and controls		
Introduction to fragment analyses (GeneScan)		
Introduction to GeneMapper (panels, allele detection, scoring, bins)		
File formats and introduction to different analyses programs		
STRUCTURE		
MULTILOCUS		
POPGENE		
GenAIEx		